

**COSC 625**

**Real Time Processing**

**FALL 2010**

**M W 5:30 - 6:45 pm**

**G18 Halle**

**Instructor:** Professor Haynes

shaynes @ emich.edu

<http://emunix.emich.edu/~haynes/625/fa10>

**Office:** 316 Hoyt Hall

**Office Hours:** TBA, but probably T W 2:00 - 5:00 pm and by appointment. Also, immediately after class for short questions.

**Text:** Buttazzo, *Hard Real-Time Computing Systems*, 2<sup>nd</sup> ed, Springer, 2005.

**Official Catalog Description:** An introduction to the problems, concepts and techniques involved in computer systems that must interface with external devices; computer characteristics needed for real time use, operating system considerations, analog signal processing and conversion, and inter-computer communication.

**This semester's iteration:** Detailed understanding of scheduling for real-time applications. Concurrent programming. Real time kernels. Real-time application development. Students will gain experience with one or more microprocessors.

Some facility with programming is expected. However, you will not need to have had specific experience in Java or in C. **See the course schedule for a more detailed description of content and related sections in the text.**

**Student work and assessment:**

Midterm:	25%
Final (non-cumulative):	30%
Programs, Homework	50%

**Grades:**

90 - 100%	A range
80 - 89%	B range
70 - 79%	C range
below 70%	unacceptable

**score**

**range**

90 - 100	A range
80 - 89	B range
70 - 79	C range
0 - 69	unacceptable range

**Test rules:**

Tests are closed book.

You may bring and use a calculator (no access to internet permitted).

You may bring and use a "crib sheet" of up to 8-1/2 X 11 inches, both sides.

**Classroom attendance:**

Class attendance is mandatory. Occasional classes may be delivered asynchronously via recorded lectures on the web.

Classroom attendance will affect your grade negatively if you miss three or more class periods.

**Academic Honesty:** I expect, and your fellow students expect, that every person in this class will adhere to the highest ethical standards. Unless otherwise specified, all work handed in to me must be your own independent work. If you act in an academically or ethically dishonest manner, you will receive an E for the final grade and I will submit your name to the dean of students for dismissal or academic sanction.

**Collaboration:**

Any allowed collaborations will be specified at the time of the assignment. *Unless specified otherwise, you may not collaborate on problem solutions; you may collaborate to acquire understanding of a problem specification.*

**Format for any problem set solutions:**

At the top of the first page, give the problem set number, the due date, your name, the list of collaborators. Each solution **MUST** be supplied in sorted order according to the problem number.

Solutions may be handwritten. Solutions must be easily readable by me.

Points will be taken off for failure to conform to the format.

**CAVEAT:** This document may be modified, with appropriate notification to students, as pedagogically necessary or advisable.

**Brick-and-mortar and on-line:** Very occasionally, lectures will be delivered in part or entirely via the web. You will be notified in class regarding upcoming dates when your physical presence is not a requirement.